IN THE CLAIMS:

Please cancel Claim 7, without prejudice to or disclaimer of the subject matter recited therein. Please amend Claim 1 as follows:

1. (Currently Amended) A birefringence measuring apparatus, comprising:

a light projecting unit for projecting approximately circularly polarized light upon a sample;

a Stokes meter for detecting a state of polarization of light from the sample; and

calculating means for calculating birefringence of the sample on the basis of a Stokes parameter from said Stokes meter, wherein said calculating means calculate the following equations:

$$B = \frac{\pi}{2} - \arcsin\left(\frac{S_3}{S_0}\right)$$

$$\phi = -\frac{\pi}{4} + \frac{1}{2}\arctan\left(\frac{S_2}{S_1}\right)$$

where B is the amount of birefringence, ϕ is a phase advance axis angle, S_0 - S_3 are Stokes parameters wherein S_0 is a total light quantity, S_1 is a horizontal linear polarization component, S_2 is a +45 degree linear polarization component, and S_3 is a right-handed circular polarized component.

2. (Original) An apparatus according to Claim 1, wherein said light projecting unit includes a light source and converting means for converting light from the light source into approximately circularly polarized light.

3. (Original) An apparatus according to Claim 2, wherein said converting means includes a phase difference plate.

4. (Original) An apparatus according to Claim 2, wherein the light from the light source has a wavelength not greater than 370 nm.

5. (Original) An apparatus according to Claim 2, wherein the light from the light source has a wavelength not greater than 200 nm.

6. (Original) An apparatus according to Claim 1, further comprising a dividing unit including three optical elements having the same reflection characteristic and the same transmission characteristic.

7. (Canceled)

8. (Original) An apparatus according to Claim 1, further comprising a memory for memorizing birefringence measured by said birefringence measuring apparatus without a sample, wherein said calculating means calculates the birefringence of the sample also on the basis of the birefringence memorized in said memory.

Claims 9-16. (Canceled)